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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/671,649

09/26/2003

Eung Don Lee

2013P106

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8791 7590 07/23/2007  
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EXAMINER

ARMSTRONG, ANGELA A

ART UNIT

PAPER NUMBER

2626

MAIL DATE

DELIVERY MODE

07/23/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/671,649

Applicant(s)

LEE ET AL.

Examiner

Angela A. Armstrong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |                                                                                                                       |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: all the variables used in various equations in the specification are not completely identified and/or defined (variable “E” is not defined in Equations 1 and 5). Appropriate correction is required.
2. Claims 2, 4, and 8 are objected to because of the following informalities: all variables used in the equations of claims 2, 4, and 8 are not properly identified and/or defined (variables “E” and “ $\Phi$ ” are not defined in the Equation of claim 2 and variable “d” is not defined in the Equation of claims 4 and 8). Appropriate correction is required.

### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-8 are rejected under 35 U.S.C. 101 because they merely manipulate an abstract idea without a claimed limitation to a practical application. The disclosed invention has a practical application in the technological arts (e.g fixed codebook searching methods); however, the claimed method, a series of steps to be performed on a computer, simply

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manipulates an abstract idea without a claimed limitation to the practical application, where practical application may be shown by

a) physical transformation

OR

b) useful, concrete and tangible result.

The disclosed invention of the instant application pertains to a method of fixed codebook searching, which is a manipulation of an abstract idea without any limitation to a practical application.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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6. Claims 1-8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 10/712,336. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to fixed codebook searching implementing calculating absolute values of correlation vectors of pulse positions for a plurality of tracks, arranging the pulse positions in a descending order based on the calculated absolute values of the correlation vectors, and performing a complete search for all possible pulse position combinations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1-8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10,740,310. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to fixed codebook searching implementing calculating absolute values of pulse position likelihood estimation vectors of pulse positions for a plurality of tracks, arranging the pulse positions in a descending order based on the calculated absolute values of the pulse position likelihood estimation vectors, in which the pulse position likelihood estimation vector is calculated based on a pitch residue signal and a correlation vector, and performing a complete search for all possible pulse position combinations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

*Claim Rejections - 35 USC § 102*

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1-8 are rejected under 35 U.S.C. 102(a) as being anticipated by Lee et al,

“Performance Analysis of G.729A Speech Codec according to Fixed Codebook Search

Methods,” Collection of Papers Announced in the Conference of the Greater Congress by the

Acoustical Society of Korea (2002), November 2, 2002.

10. Regarding claim 1, Lee discloses a method for fixed codebook search (section 2.3, fixed codebook search methods) comprising: calculating absolute values of pulse position likelihood estimation vectors of pulse positions for each track in a plurality of tracks (pages 6-7, section 2.3.3); selecting a predetermined number of pulse positions for each track in a descending order of the absolute values of the pulse position likelihood estimation vectors (pages 6-7, section 2.3.3); selecting one pulse position among the selected pulse positions for each track, per each track, creating all possible pulse position combinations consisting of the selected pulse positions, and conducting a complete search for the all possible pulse position combinations (pages 6-7, section 2.3.3); and selecting one pulse position combination among the all possible pulse position combinations subjected to the complete search (pages 6-7, section 2.3.3).

Regarding claim 2, Lee discloses an equation for selecting a pulse position combination at page 5, equations 2 and 3.

Regarding claim 3, Lee discloses the pulse position likelihood estimation vector is calculated using a pitch residue signal and correlation vector information at page 5, equation 5.

Regarding claim 4, Lee discloses an equation for calculating the pulse position likelihood estimation vector at page 5, equation 5.

Regarding claims 6-8, claims 6-8 are similar in scope and content to claims 1-4 and are therefore rejected under similar rationale.

### *Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

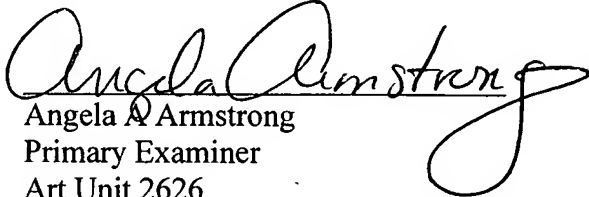
Nahumi (US Patent No. 5,822,724) discloses simplified methods of searching a codebook table.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 571-272-7598. The examiner can normally be reached on Monday-Thursday 11:30-8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Angela A. Armstrong  
Primary Examiner  
Art Unit 2626

AAA  
June 21, 2007